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ABSTRACT

Over recent years critics of debate have expressed disenchantment with the rate of delivery used by intercollegiate debaters. To determine how fast Cross Examination Debate Association (CEDA) debaters speak compared to normal public speaking rates, and whether CEDA has met its goal of providing a forum that is consistent with the rate of public speaking, a study examined the transcripts of the 1986, 1987, and 1988 CEDA debate finals. A computer program, "Wordcount," was used to determine the average words per minute (wpm). The total average for all speeches for the three years examined was 234 wpm. The results suggest that CEDA debate speaking rates exceed those which are generally considered to be at the top end of "normal" public speaking rates (100 to 200 wpm) range. Several possible overlooked factors which may encourage debaters to speak more rapidly include (1) the environment in which the activity takes place; (2) the amount of reading typically involved in debate; and (3) the competitive nature of debating. Debate judges should consider honoring their listening skills before concluding that rapid speech is necessarily incomprehensible. (One table of data is included, and 24 references are appended.) (MS)

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A QUANTITATIVE ANALYSIS OF CEDA SPEAKING RATES

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A QUANTITATIVE ANALYSIS OF CEDA SPEAKING RATES

Over recent years critics of debate have expressed disenchantment with the rate of delivery used by intercollegiate debaters. Criticism aimed at the National Debate Tournament (NDT) has been especially harsh. For example, Freeley (1986) contends that, "[e]xperienced varsity NDT debaters operating in tournament situations on the national circuit are under great pressure to pack as much evidence and argument as possible into the time limits. Their delivery may often exceed 200 words per minute [wpm]" (p. 273). The speaking rate of NDT debaters is well documented (Rives, 1976 Colbert, 1981; Rouse & Thomas, 1984; and Colbert, 1987). Colbert (1987) found that NDT finalists ranged from 200 wpm in 1968 to 302 wpm in 1982 and the relationship between wpm and recency was statistically significant. In fact, one reason often cited for the creation of CEDA (the Cross Examination Debate Association) is that NDT had perpetuated an incomprehensible rate of delivery. Hollihan, Riley, and Austin (1983) wrote CEDA:

> was created because Howe and his colleagues believed that NDT was failing in its educational mission. Debaters were speaking too quickly, reading too much evidence, and relying on jargon that could not be understood by anyone except trained debate judges" (p. 872).

Thomas (1983) concurred when he stated that, "One goal of (CEDA) was to furnish a communication-centered event, in contrast to NDT's information processing orientation. The implications of this difference were in preferred manners of style and delivery, along with the weight placed upon evidence in debates" (p. 17).

To be sure, CEDA debater speaking rates are typically faster

than other formats of public speaking. Ulrich (1985) explains that, "CEDA's formation was partly out of dissatisfaction by many with the delivery of NDT debaters. In recent years, however, this distinction has been less clear, as CEDA debaters became faster and faster" (p. 58). Unfortunately, much of the literature chastising debater speaker rates is often supported by conjecture and speculation (Jones, 1978; Brooks, 1984; and Ulrich 1985).

The literature is abundant with ranges of acceptable speaking rates for public speaking, and quantitative measurement of speaking rates are typically reported in terms of words per minute (wpm). The consensus of experts agree that the range of normal public speaking is between 100 and 200 wpm (Fairbanks, 1940; Correll & Tiffany, 1960; Ross, 1965; Capp, 1966; Jensen, 1970; Burgoon & Ruffner, 1974; DeVito, 1981; Verderber, 1984; and Mayer, 1988).

The questions we should ask are, how fast do CEDA debaters speak compared to normal public speaking rates, and has CEDA met its goal of providing a forum that is consistent with the rate of public speaking? Little or no data exist which measures CEDA delivery rates in terms of wpm. For those who observe CEDA debate, it is apparent that the rate of delivery exceeds the rate of normal public speaking. There are rumblings within the debate community that CEDA speaking rates have increased, and may eventually become as fast as NDT debate. The problem is that the critics seldom quantify the rate nor do they operationalize their definitions. The current study attempts to answer the simple question, "How fast do CEDA debaters speak?" By reporting quantitative measurement, a more

precise estimate of CEDA speaking rates may be established.

PROCEDURES

The transcripts of the 1986, 1987, and 1988 CEDA debate finals were obtained (as prepared by James Brey of Florida State University). After consulting with Brey about editorial insertions and changes, the transcripts were modified to include only the text of the actual debate. Untimed introductions, recognitions, conclusions, cross examinations, and editorial insertions (such as "laughter") were purged from the transcripts prior to analysis. "Wordcount," a computer program developed by Kernigan and Plauger (1982), was used to count the actual number of words presented in each constructive and rebuttal speech. Kernigan and Plauger (1982) define a word as, "[a]ny sequence of alphabetic characters surrounded by nonalaphabetic characters" (p. 30). Given this definition the procedure is extremely accurate.

The total number of words were divided by eight for constructive and five for rebuttal speeches to determine an average wpm for each speaker. The author consulted with Brey to verify the accuracy of the time limits. After reviewing the video tapes, Brey suggested the time limits were very precisely followed and that no speaker ended before their alloted time.

A reliability measure of the program Wordcount was obtained by comparing it with counting the exact number of words count from sixteen randomly selected pages (one from each speech) of the transcripts. The reliably of Wordcount in this study was as follows: N = 16; $\bar{X}$ of a = 234.94; $\bar{X}$ of b = 234.75; SD of a = 51.03; SD of b = 50.74; and r = .9998.

Three qualifications regarding the sample are appropriate. First, the data are only representative of CEDA, not NDT debate. Second, the data may not be representative of all CEDA style debate because transcripts were only available for the first two final rounds of the CEDA National Tournament. Some readers, however, may consider the data relevant beyond CEDA finals because of the "role model effect" that national finalists allegedly have over other students in the activity. The third qualification of this research concerns the assumption that wpm is an accurate portrayal of speaking rates. It is obvious that some people have the physical characteristics needed to articulate and enunciate at rapid rates while others do not. Spacing, pausing, and vocal variation in word length are also important considerations. Finally, no inferential statistical procedures were conducted given the limited nature of the data available; hence generalization to all CEDA debaters should only be made with extreme caution. While these factors limit the generalizabilty of the data in this study, it is still valuable to establish a baseline measurement for future research concerning CEDA speaking rates, and to provide estimates that are more accurate than subjective speculation. Since the vast majority of the literature compares speaking rates by wpm, this study may be viewed as an extension of such research.

RESULTS

The results of speaking rates for the 1986, 1987, and 1988 CEDA final debate rounds are reported in Table I. The analysis revealed that the first affirmative constructive speaker spoke 211 wpm in

1986, 219 wpm in 1987, and 216 wpm in 1988. The first negative constructive speaker spoke 262 wpm in 1986, 230 wpm in 1987, and 179 wpm in 1988. The second affirmative constructive speaker spoke 249 wpm in 1986, 245 wpm in 1987, and 240 wpm in 1988. The second negative constructive speaker spoke 237 wpm in 1986, 213 wpm in 1987, and due to technical difficulties the transcript of 1988 second negative constructive speech was not available.

The first negative rebuttalist spoke 254 wpm in 1986, 244 wpm in 1987, and 222 wpm in 1988. The first affirmative rebuttalist spoke 230 wpm in 1986, 246 wpm in 1987, and 248 in 1988. The second negative rebuttalist spoke 230 wpm in 1986, wpm 229 in 1987, and 277 wpm in 1988. The second affirmative rebuttalist spoke 253 wpm in 1986, 244 wpm in 1987, and 222 wpm in 1988.

The total average for constructive speeches was 240 wpm in 1986, 227 wpm in 1987, and 211 wpm in 1988. The total average for rebuttal speeches was 242 wpm in 1986, 241 wpm in 1987, and 242 wpm in 1988. The total average for all speeches in 1986, 1987, and 1988 was 234.

DISCUSSION

The results of this study suggest that CEDA debate speaking rates exceed those which are generally considered to be at the top end of "normal" public speaking rates (100 to 200 wpm) range. Any discussion of whether or not faster speaking rates are desirable should address the issue of comprehension. Do faster speaking rates lower comprehension? While intuitively it seems that faster speaking rates would decrease comprehension, some data support the contrary. Voor and Miller (1965), for example have reviewed the

literature and discovered:

> When all other variables are controlled, the rate of delivery, whether hesitant (90 to 100 wpm) or rapid fire (350 to 500 wpm, rates frequently attainable only by mechanical manipulation of prerecorded material), does not significantly affect comprehension as measured by the number of facts or statements remembered. (p. 452)

Certainly no debaters in the 1986-1988 CEDA National final rounds have spoken at the rate Voor and Miller operationalize as a "rapid fire rate." The average rate for all of the debaters in the present study was approximately 242 wpm. Orr (1968) suggests, "[t]he exact degree of acceleration at which intelligibility and/or comprehension begin to decline is. . .about 275-300 wpm. . ." (p. 289). If Orr is correct, the average CEDA national finalists have not exceeded the range of comprehension over the past three years. Another important question is, Why do debater speaking rates exceed normal public speaking rates? Given the abundance of complaints about rapid delivery it seems logical that debaters would slow down, if for no other reason, to appease their judges. This reasoning seems especially pertinent for those who subscribe to the philosophy that debaters speak rapidly for competitive reasons. Since a substantial number of CEDA judges apparently dislike rapid delivery, it would appear those debaters who desire to win would conform. The problem may be explained by several overlooked factors which may also encourage debaters to speak more rapidly.

One reason why debaters may speak more rapidly involves the environment in which the activity takes place. Most intercollegiate debates take place in front of an audience of one person who serves as the judge. There is no public, thus it seems presumptuous to

expect that normal public speaking behaviors would result. Devito (1981) explains:

> The size of the audience will also influence rate. Generally, the larger the audience the more slowly a speaker is expected to speak. This is actually related to the formality of the occasion. Generally, as the size of the audience increases so does the formality. Both seem to call for a more measured, slower rate of speech. Small audiences, which are relatively informal, seem to allow for a more rapid-fire delivery. (p. 339)

Debate competition is different from traditional public address because it takes place in a different environment. Should educators be surprised when debate speaking rates exceed other forms of public speaking? Can debate educators place students into an environment that encourages rapid speaking and expect them to speak slowly? It does not seem reasonable to ask debaters to pretend as though they are speaking to a large number of people when typically they speak to a judge, their partner, and two opponents. Although larger audiences (10 to 15) are sometimes present for CEDA elimination rounds, those are generally small because many teams travel long distances and leave before the completion of the tournament. To those who advocate adaptation in CEDA, should we not expect debaters to adapt to their environment, as well as, specific judges?

Second, debaters may speak more rapidly due to the amount of reading typically involved in debate. Competitive debate involves substantially more reading during the actual presentation than other public speaking situations. Most debaters are encouraged to support their arguments with published quotations. The literature has suggested for many years that reading orally occurs at a faster rate then does speaking extemporaneously. Brigance (1926) wrote:

> The average rate of reading on nontechnical matter is, perhaps from 300 to 400 words a minute. The rate for technical matter or heavy reading of any sort, may fall as low as one-tenth of this normal rate, but this rate of 300 to 400 words a minute holds for reading matter of roughly the grade as the average speech given before a general audience. (p. 341)

The literature suggests reading occurs at a faster rate than extemporaneous speaking. Thus, the need to read evidence could contribute to the rapid rate of speaking during debates. It appears that NDT debaters read greater amounts of evidence and speak more rapidly than CEDA debaters. The difference in the amount of time spent reading could account for a portion of the speed differential between the two.

There is little doubt that competitive motives also contribute to faster speaking rates, but competition is an inherent part of the debate activity. Can we make debating non-competitive and still call it debate? If situational, selection, and structural reasons contribute to a rapid rate of speaking, the nature of the activity may be as responsible as the participants for faster speaking rates.

Finally, we should consider whether debaters generally speak too fast or whether some critics of fast debate are simply deficient listeners? According to Jensen (1970):

> An average listener can absorb speech at about 400 words per minute, with a potential of perhaps double that. Experiments have demonstrated that a listener can comprehend a message that is abnormally speeded up far beyond the regular rate of a speaker (p. 128).

It is clear that Jensen was not referring to listening to technical presentations like academic debates, however, debate judges should consider honing their listening skills before concluding that all rapid speech is incomprehensible. Verderber (1984) suggests,

"Usually even the fastest rate is acceptable if words are well articulated and there is sufficient vocal variety and emphasis" (p. 291). Bradley (1974) says, "Although some are critical of a fast rate of speaking, so long as the speaker can articulate sounds in a comprehensible way and it is appropriate to the situation, there seems little justification for antipathy to a fast rate" (p. 239). Thus, it may be more fruitful for forensic educators to train their debaters in ways to speak rapidly rather than criticizing them on judging philosophies, tournament ballots and journal articles. It is evident that not everyone has the mental and physiological skills to speak at or listen to rapid vocal delivery. Competitive academic debate has among the fastest speaking rates for public forums. However, if the behavioral characteristics of the activity encourage faster rates it may be unrealistic and unfair to attempt to suppress them. The data from this study suggest that while CEDA debating exceeds normal public speaking rates, it appears to be within the range of comprehension, assuming proper articulation. It should be stressed that proper articulation is essential to assure comprehension even at slower rates.

Future research should investigate several factors which may help to explain why debaters insist on rapid delivery. The content of CEDA debates should be analyzed to measure the percentage of evidence being presented to determine if the reliance on reading evidence significantly contributes to rapid delivery. Transcripts of nonchampionship CEDA debates should be analyzed to determine if the CEDA National finalists are substancially different from other

CEDA debates. Through collecting quantitative data generalizations concerning CEDA speaking rates will pocess greater accuracy and validity compared to the speculation often currently reported.

TABLE-I

SPEAKING RATES OF THE CROSS EXAMINATION DEBATE ASSOCIATION
NATIONAL FINALS 1986-88

	1986		1987		1988	
SPEECH	WORDS	WPM	WORDS	WPM	WORDS	WPM
1AC	1,685	211	1,749	219	1,725	216
1NC	2,098	262	1,843	230	1,435	179
2AC	1,988	249	1,962	245	1,922	240
2NC	1,895	237	1,707	213	*	
Totals	7,666	240	7,261	227	5,082	211
1NR	1,271	254	1,220	244	1,110	222
1AR	1,150	230	1,228	246	1,238	248
2NR	1,149	230	1,146	229	1,384	277
2AR	1,263	253	1,221	244	1,110	222
Totals	4,833	242	4,815	241	4,842	242
TOTALS	12,499	241	12,076	234	9,924	227

WPM = Words Per Minute

* = transcript not available

REFERENCES

Bradley, B. E. (1974). Fundamentals of Speech Communication: The credibility of ideas. Dubuque, Iowa: Wm. C. Brown. p. 239.

Brigance, W. N. (1926). How fast do we talk? The Quarterly Journal of Speech Communication, XII, 337-342.

Brooks, J. (1984, December). Current problems in college debate. Debate Issues, 18, 14.

Burgoon, M. & Ruffner, M. (1974). Human communication. New York: Holt, Rinehart, and Winston.

Capp, G. R. (1966). How to communicate. Englewood Cliffs: N. J.: Prentice-Hall, Inc.

Colbert, K. R. (1981). Speaking rates of NDT finalists 1968-80. Journal of the American Forensics Association. 18, 75-6.

Colbert, K. R. (1981). Debater speaker rates: How fast is too fast? Debate Issues, XX, 1-8.

Correll, J. & Tiffany, W. R. (1960). Phonetics: Theory and application to speech. New York: McGraw-Hill.

Devito, J. A. (1981). The elements of public speaking. New York: Harper & Row, Pub.

Fairbanks, G. (1940). Voice and articulation drillbook. New York: Harper & Row, Pub.

Freely, A. (1986). Argumentation and debate, Wadsworth Pub. Co.: Belmont, Calif.

Hollihan, T., Riley, P., & Austin, C., (1983). A content analysis of selected CEDA and NDT judges' ballots. In D. Zarefsky, M. Sillars, & J. Rhodes (Eds.) Argumentation in transition: Proceedings of the third summer conference on argumentation, Speech Communication Association: Annandale, Virginia.

Jensen, J. V. (1970). Perspectives on oral communication. Boston, Mass.: Holbrook Press, Inc.

Jones, M. (1978). CEDA vs. NDT: The fact-value dichotomy emerges in educational debate. (ERIC Document Reproduction Service No. ED 169 581)

Kernigan & Plauger (1982). Software tools. In W. Holder, The word

plus. Oasis Systems: San Diego, Calif.

Mayer, L. (1988). Voice and diction. (8th ed.). Wm Brown Pub. Company: Dubuque: Iowa.

Orr, D. B. (1968). Time compressed speech: A perspective. The Journal of Communication. 18, 288-292.

Rives, S. G. (1976). Final debate-national debate tournament technical notes: Speaking rates and evidence use. Journal of the American Forensics Association, 13, 49.

Ross, R. S. (1965). Speech communication fundamentals and practice. Prentice-Hall, Inc.

Rouse, R. & Thomas, D. (1984). The first amendment rebuttal: A content analysis of 13 NDT transcripts. In Advanced debate. D. Thomas, and J. Harte (eds.). National Textbook Co.: Lincolnwood, Ill.

Thomas, D. (1983). Research in forensics from the last five years: Trends, omissions, and recommendations. Paper presented at the Speech Communication Association National Convention. Washington D. C.

Ulrich, W. (1985). Eliminating the abuses of CEDA debate: The judge as referee. CEDA Yearbook, D. Brownlee (ed.)

Verderber, R. F. (1984). Communicate. Belmont, Calif.: Wadsworth Pub. Co.

Voor, J. B., & Miller, J. M. (1965). The effects of practice upon the comprehension of time-compressed speech. Speech Monographs, 32, 452-4.